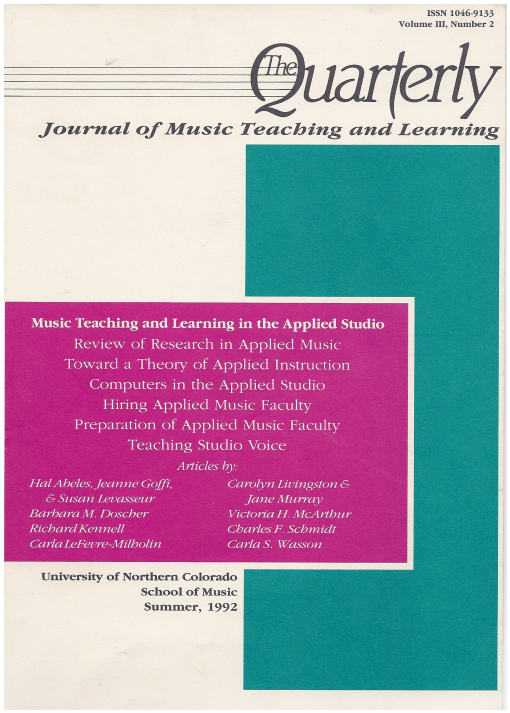

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It is with pleasure that we inaugurate the reprint of the entire seven volumes of The Quarterly Journal of Music Teaching and Learning. *The journal began in 1990 as* The Quarterly. *In 1992, with volume 3, the name changed to* The Quarterly Journal of Music Teaching and Learning *and continued until 1997. The journal contained articles on issues that were timely when they appeared and are now important for their historical relevance. For many authors, it was their first major publication.* Visions of Research in Music Education *will publish facsimiles of each issue as it originally appeared. Each article will be a separate pdf file. Jason D. Vodicka has accepted my invitation to serve as guest editor for the reprint project and will compose a new editorial to introduce each volume. Chad Keilman is the production manager. I express deepest thanks to Richard Colwell for granting VRME permission to re-publish* The Quarterly *in online format. He has graciously prepared an introduction to the reprint series.*

Toward A Theory Of Applied Music Instruction

Richard Kennell
Bowling Green State University

In his famous book, *The Structure of Scientific Revolutions,* Kuhn (1970) differentiated between normal science and revolutionary science. While scientific revolutions establish new paradigms or understandings of the world, normal science systematically tests and confirms our existing theories of the world. Most contemporary research is "normal" in the sense that it is designed to evaluate selected aspects of existing theory.

Our ability to conduct quality normal research is therefore contingent upon a number of important steps. We must, of course, start with a solid theoretical understanding of our research area. We must review the work of other researchers, frame the best research questions possible, create an optimum research strategy, select appropriate measurement techniques, gather our data, and interpret our results.

While musicians over the years have become increasingly sophisticated in their use of empirical methods, few researchers have attempted to study the most fundamental unit of music teaching and learning, the private music lesson. One-on-one instruction in music has rarely been the focus of research for a number of reasons.

First, the professionals who usually teach studio music lessons are not trained in the traditions and methods of empirical science. Applied music teachers are members of an important oral tradition in which personal experience and historical anecdote form the basis of contemporary common practice. Performance expertise is passed from one generation of performers to the next through the lineage of personal experience and the applied lesson. At the same time, musicians trained in the tradition of empirical methodology have most often focused their attention on music learning contexts commonly found in schools, i.e., music instruction in groups.

> "Applied music teachers are members of an important oral tradition in which personal experience and historical anecdote form the basis of contemporary common practice."

Another reason for our historical focus on group instruction research is that our quantitative methodologies have required large numbers of subjects. One-on-one instruction in music performance has raised significant design and measurement difficulties. The profession has tended to rely on familiar experimental tools rather than seek research methods more appropriate for the context of applied music lessons. Thus, we have framed our research questions to fit our evaluation tools.

Music researchers have also faced significant measurement problems. Music, of course, is a multidimensional acoustical phenomenon involving complex and invisible human cognitive processing. When we study the role of the performer, we add the difficulty of understanding psychomotor functioning. The use of unidimensional, subjective rating systems has

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been criticized by practitioners as atomistic and "unmusical." The reliability of human judgment has been an issue while the study of applied music in the laboratory has lacked environmental validity.

Most important, however, we have lacked a fundamental model of applied instruction. In Kuhnian terms, we have attempted to conduct normal science without first establishing a theoretical foundation. Two recent studies dealing with applied music will help to illustrate this lack of theoretical grounding for applied music research.

Recent Applied Music Research

Hepler's 1986 dissertation, *The Measurement of Teacher/Student Interaction in Private Music Lessons and Its Relation to Teacher Field Dependence/Independence*, was a descriptive study that was specifically designed to contribute to our understanding of the inner workings of applied music lessons. To accomplish this, Hepler developed a new observational instrument, the Observational System for Applied Music (OSAM), to analyze interactions between teachers and students in applied music lessons. In the development of this instrument, a variety of teacher behaviors and student behaviors was first cataloged. This catalog of behaviors was then validated by a panel of experts. Videotapes of 20 college-level applied teachers were analyzed using the OSAM. Table 1 summarizes the frequency of observations from this study.

Hepler commented on his results: "The observed lessons were dominated by teacher statement-oriented behavior. Student behavior was highly dominated by performance within the instrumental media. Very little variety of student behavior was observed" (Hepler, 1986, p. iii). In other words, in applied music lessons, students play and teachers talk.

In another study, Rosenthal (1984) experimentally evaluated three different teacher strategies in the applied music lesson. Rosenthal compared gains in performance scores among three representative pedagogical treatments against a control, a practice-only group. The experimental treatments included a verbal description-only group, a modeling-only group, and a combination of verbal description and modeling group. Rosenthal reported that "...the highest scores were consistently attained by subjects in the model-only group on all variables" (Rosenthal, 1984, p. 269).

To Rosenthal, applied music lessons consisted of interactions between the teacher and student. The teacher's role was to decide the proportion of verbal explanation and performance demonstration in each intervention. In lessons, the teacher could ver-

Table 1. Individual Behavioral Categories Representing 1.00% or More of Total Behavior

Behavior		Mean %
S51	Student Performance in Medium	25.11
T12	Teacher Conceptual Statements	16.35
T14	Teacher Unclassified Lesson-Related Statements	10.66
T11	Teacher Technical Statements	10.50
T51	Teacher Performance in Medium	7.61
T41	Teacher Vocal Performance Outside of Medium	7.33
T31	Teacher Positive Vocal Appraisal	7.00
T52	Teacher Body Movement	3.54
T32	Teacher Negative Vocal Appraisal	2.60
T13	Teacher Expressive Statements	2.24
T22	Teacher Conceptual Questions	1.39
I	Inactive Off-Task	1.32
T24	Teacher Unclassified Lesson-Related Questions	1.30
S14	Student Unclassified Lesson-Related Statements	1.00

Summary of Teacher-Student Interactions: (Hepler, 1986, p. 297)

bally describe the music for the student, demonstrate the music, or combine these two strategies.

In both of these important studies, one descriptive and the other experimental, the subject of applied music instruction was approached through our existing understanding of applied music instruction. This knowledge, however, has been acquired through our experience as participants in the oral tradition of music performance. The problem with experiential knowledge, however, is that our familiarity with applied lessons may obscure important features of the lesson. In the same way that the color of the water may be invisible to the swimming fish, highly automated cognitive strategies involved with the solving of complex musical problems might be invisible to the observer of applied lessons.

Nevertheless, these two studies reveal an underlying understanding of the theory of applied music instruction. This theory might be represented as follows: Applied lessons consist of dynamic interactions between a more experienced teacher and a less experienced student, in which students play and teachers talk. When teachers talk, they might provide descriptive verbal information about the music, or they might sometimes demonstrate an effective performance of the musical task for the student, or they might combine a model demonstration with a verbal description for the student. Of these various strategies available to the teacher, the demonstration-alone strategy has been found to produce the greatest gains in performance scores among music students in a controlled study.

There are, of course, severe problems with this conceptualization of applied music instruction. First, it is extremely simplistic. Any applied teacher should be able to offer personal anecdotes which clearly transcend these limited teacher behaviors. Next, there is an apparent contradiction between the Hepler and Rosenthal studies. While Rosenthal suggests that modeling is the most effective pedagogical intervention in the applied music lesson, Hepler's observation of real applied teachers (see Table 1) reveals that applied teachers talk almost four times more often than they offer models. Fifty-two percent of each lesson was occupied with teacher statements and questions, compared with only 14 percent of time devoted to teacher modeling behaviors (Hepler, 1986).

A final limitation of this theory of applied music is that it offers little insight into our understanding of the cognitive involvement

SELF	JOINT
Task is selected to determine student's current capabilities	Task is selected BECAUSE of the student's current capabilities
Teacher has limited knowledge of the student	Teacher has extensive knowledge of the student
Example: Paper-and-pencil test	Example: Studio music lesson

Figure 1. Problem-Solving Contexts

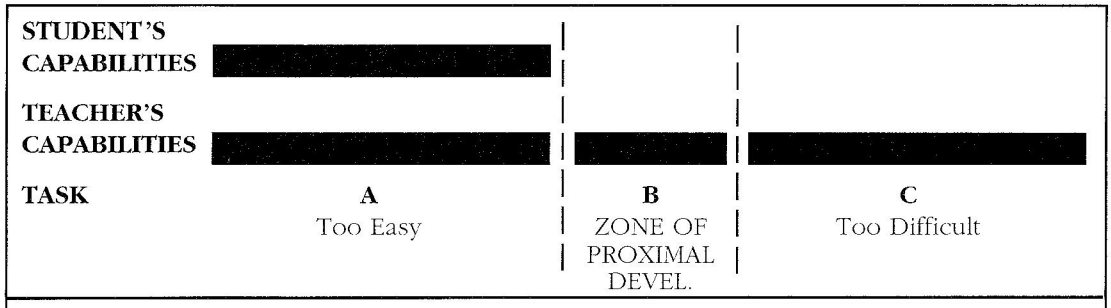

Figure 2. Zone of Proximal Development

"Any model of the dynamics of expert-novice music instruction must include a rationale for the variety of choices that teachers make in lessons. A theory of applied music instruction must explain 'why' questions as well as 'what' questions."

of the teacher in the lesson. Any model of the dynamics of expert-novice music instruction must include a rationale for the variety of choices that teachers make in lessons. A theory of applied music instruction must explain "why" questions as well as "what" questions.

We need to construct a more complete theory that explains one-to-one instruction in applied music. We need to develop a theory that accommodates the complexity and richness of interactions observed in applied lessons. In short, we need to explore a completely different foundation for understanding human learning through social interaction. Just such an alternative paradigm can be found in the writings of Russian psychologist Lev Vygotsky.

Lev Vygotsky

In the 1930s, when much of the world's attention was dominated by psychological testing and the measurement of human intelligence, Russian psychologist Lev Vygotsky raised a lonely voice in protest. To Vygotsky, standardized problems only measured "the completed part of the child's development" (Vygotsky, 1987, p. 187). To assess a student's true potential, we should observe how well the student improves under the guidance of an expert teacher. To Vygotsky, intelligence tests measured only self problem-solving skills. Much of human learning, however, takes place in collaboration with more experienced others. Such relationships are known as "joint problem-solving contexts."

It is important to differentiate between self problem-solving and joint problem-solving as two fundamentally different learning contexts. Our familiar school paper-and-pencil tests are examples of the self problem-solving context (see Figure 1). These tests are widely used to evaluate group instruction situations, especially where the teacher has limited knowledge of the individual student's capabilities. Each test item presented to the student requires a solution that reflects the student's previously acquired knowledge. In music, sight-reading would be considered an example of self problem-solving.

In contrast, Vygotsky defined the joint problem-solving context as "...where there are participants who exercise differential responsibility by virtue of differential expertise" (Cole, 1985, p. 155). Joint problem-solving contexts involving experts and novices have specific characteristics. First, the expert typically has detailed and in-depth knowledge of the individual student's capabilities. Also, tasks are selected for a specific novice because of his or her existing knowledge. The private music lesson and weekly assignment therefore epitomizes Vygotsky's joint problem-solving context.

Vygotsky's Zone of Proximal Development

Vygotsky further described an area of potential functioning shared between the expert and novice which he called the Zone of Proximal Development (See Figure 2). The Zone of Proximal Development was conceived by Vygotsky as the area just beyond the student's existing capabilities. It is a region that becomes accessible to the student only through the assistance of a more competent teacher.

Vygotsky defined the Zone of Proximal Development as "...the distance between the actual developmental level as determined by independent problem solving and the level of potential development as determined through problem solving under adult guidance or in collaboration with more capable peers" (1978, p. 86).

Applying this notion to applied music lessons, we recognize that the student works independently throughout the week to prepare her or his lesson assignments. This is self problem-solving. After reaching peak perfor-

mance ability, the student attends a lesson with an expert teacher. In the lesson, the teacher prompts the student to achieve even higher levels of performance. The teacher then assigns the student's work for the following week and the entire process is repeated. The private lesson exemplifies Vygotsky's notion of joint problem-solving.

For Vygotsky, the gap between the teacher's assigned tasks and the student's current capabilities must not be too narrow (such as Task A in Figure 2) or too wide (such as Task C). The existence of a manageable gulf in the Zone of Proximal Development (such as Task B) prompted learning to take place. Thus, students should always be challenged by material that is not too easy or too difficult. Vygotsky wrote, "...the notion of a Zone of Proximal Development enables us to propound a new formula, namely that the only 'good learning' is that which takes place in advance of development" (Vygotsky, 1978, p. 89). Applied music instruction potentially represents what Vygotsky called "good learning."

Vygotsky outlined his Zone of Proximal Development over 50 years ago. At his death in 1934, many details of his theoretical constructs were incomplete. Soviet scientific doctrine of the time was dominated by officially sanctioned Pavlovian theories. Vygotsky's book *Thought and Language* was not translated into English until 1962. For almost 30 years, Vygotsky's views were unknown outside the Soviet Union.

Since that time, however, a number of Western researchers have been inspired by Vygotsky's ideas and have expanded upon them. Bruner (1986), for example, has been very influential in sharing these ideas with the world, even comparing Vygotsky's contributions with those of two other twentieth-century giants, Freud and Piaget. It was Bruner and his colleagues who coined the term "scaffolding strategy" to represent the teacher's interventions in joint problem-solving contexts. The scaffold is an appropriate metaphor for the teacher's actions in the Zone of Proximal Development. We erect scaffolding to reach beyond our current capabilities. A scaffold is temporary, and it is removed when it is no longer needed. This metaphor allows us to focus on teacher behaviors in the joint problem-solving context. In music lessons, we would be interested in the specific intervention strategies used by the teacher. How do music teachers create a "scaffold" for their students?

Fortunately, Bruner and his colleagues have given us a nice start. In their 1976 research study, Wood, Bruner, and Ross describe the following six different teacher strategies which they observed in a joint problem-solving context:

1. **Recruitment.** This is a strategy to enlist the problem-solver's interest in and adherence to the requirements of the task [*"Have you studied Hindemith yet in theory class? This next piece is by Paul Hindemith."*]
2. **Reduction of Degrees of Freedom.** This strategy exemplifies the task by reducing the number of constituent acts required to reach solution. [*"Play only the rhythm of this melody and use just one pitch..."*]
3. **Direction Maintenance.** This strategy keeps the student in pursuit of a particular objective, goal setting. [*"I'd like you to prepare this piece for our recital in four weeks..."*]
4. **Marking Critical Features.** This strategy marks or accentuates certain features of the task that are relevant. [*"That note is an F sharp, not an F natural..."*]
5. **Frustration Control.** This strategy reduces anxiety in the student. [*"I know this is hard, but just do your best."*]
6. **Demonstration.** This strategy models solutions to a task. It often involves an "idealization" of the act to be performed. [*"Listen to this..." (followed by a live or recorded performance)*] (p. 98).

The application of these different teacher

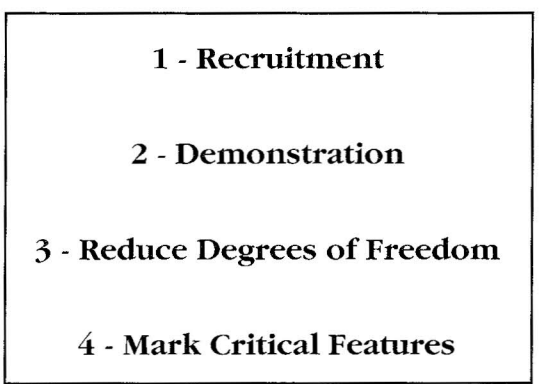

Figure 3. Order of Presentation Theory: Jerome Bruner

scaffolding categories to applied music lessons raises yet additional questions. Do these scaffolding strategies appear in music lessons? How do they work? What rules underlie the strategic choices that teachers make on a moment-to-moment basis?

Bruner, in reviewing these types of questions, suggested that the teacher's choices were built on an "Order of Presentation" principle (see Figure 3). First, the teacher gets the student's attention (recruitment); then the task is modeled in its entirety (demonstration). Next, the teacher should simplify the task (reduce degrees of freedom); finally, the teacher should mark critical features (Bruner, 1985). After these steps are completed, the teacher than "raises the ante" and assigns the next task.

In a later follow-up study, Wood, Wood, and Middleton (1978) predicted that the teacher's decision to become more involved or less involved depended on the teacher's assessment of the student's performance (see Figure 4). According to these authors, experts in joint problem-solving contexts function under a hierarchical rule for making scaffolding decisions. This rule is simply stated:

> If the child succeeds, when next intervening offer less help. If the child fails, when next intervening take over more control (Wood, Wood, & Middleton, 1978, p. 133).

The teacher would select a less intrusive intervention if the student's performance improved, i.e., select a strategy lower down the hierarchical scaffolding list. The teacher would select a more intrusive intervention if the student's performance deteriorated, i.e., select a strategy further up the hierarchical scaffolding list. The teacher's choice of a scaffolding strategy would thus be determined by his or her assessment of changes in the student's performance.

There are number of aspects of scaffolding theory that are important to underscore at this point. First, note the additional detail that scaffolding theory suggests. The teacher's verbal behavior now is assigned to six discrete functional categories. Some teacher talk is instructive in nature, such as the strategies of reducing degrees of freedom and marking critical features. Other forms of teacher talk are also accommodated. There are functional categories for administrative, encouraging, and attention-getting interactions as well. Even nontalking teacher behaviors such as gestures that mark critical features and demonstrations are accommodated. With scaffolding theory, we begin to see a role for teacher decision-making: Which scaffolding strategy will I choose for this pedagogical moment in the lesson?

Scaffolding theory enables us to frame new research questions. What is the relationship between instructional strategies and adminis-

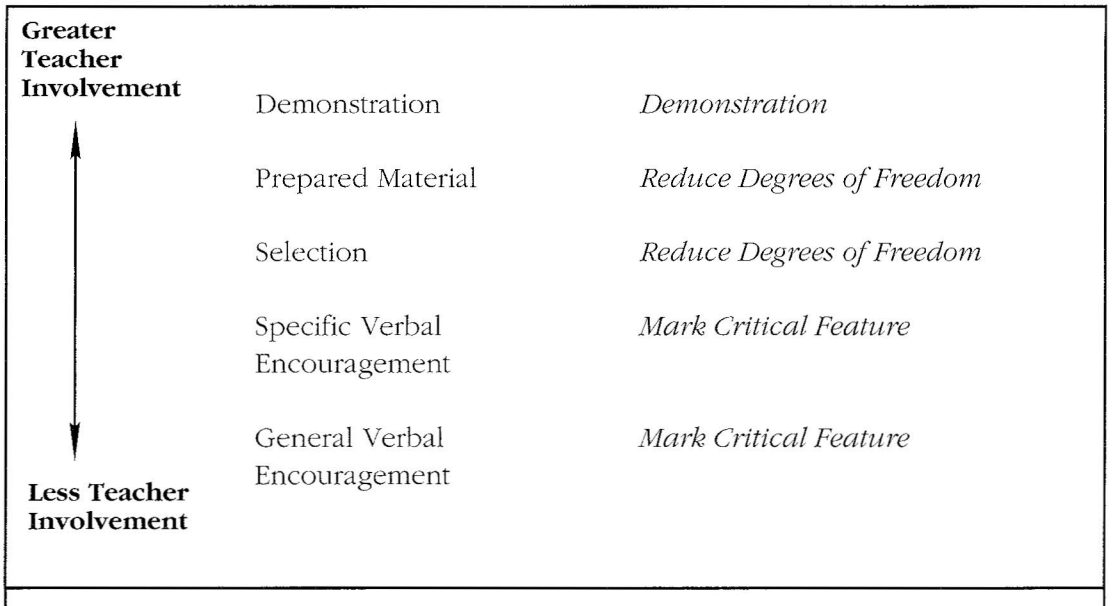

Figure 4. Hierarchy Theory: Wood, Wood, and Middleton.

trative strategies in the lesson? What is the range of different teacher styles represented in Marking Critical Feature strategies? Do globally effective teaching strategies exist, or are scaffolding strategies context-specific? Do applied music teachers employ scaffolding strategies in private music lessons? Can we somehow evaluate and compare the "Order of Presentation" theory formulated by Bruner with the "Hierarchical Rule" theory presented by Wood, Wood, and Middleton?

Kennell (1989) explored some of these relationships in a pilot study by reviewing transcripts prepared from direct observations of college applied music lessons. He reviewed transcripts of two different applied teachers working with two different students in a total of seven applied lessons: Three consecutive lessons with one teacher/student dyad and four consecutive lessons with the other teacher/student dyad. The transcripts noted both verbal dialog and nonverbal interactions between the teachers and the students. Each teacher interaction in each lesson transcript was coded according to the Wood, Bruner, and Ross scaffolding strategy categories (see Table 2).

The pilot study scaffolding data did not support Bruner's Order of Presentation theory. Note the very small number of Recruitment strategies recorded.

From visual analysis of Table 2, the Marking Critical Features strategy was the strategy of choice for both applied teachers. The Demonstration strategy and the Reducing Degrees of Freedom strategy were somewhat comparable as secondary strategies. The other three strategies—Recruitment, Direction Maintenance, and Frustration Control—were less frequently used by these two teachers. It is interesting to note that the two applied teachers marked critical features approximately four times more often than they reduced degrees of freedom or offered demonstration interventions.

Table 2. Frequencies of Observed Teacher Scaffolding Behaviors

Scaffolding Categories

1 = Recruitment
2 = Reduce Degrees of Freedom
3 = Direction Maintenance
4 = Mark Critical Features
5 = Reduce Frustration
6 = Demonstration

	Scaffolding Category					
Teacher A	**1**	**2**	**3**	**4**	**5**	**6**
Lesson 1	1	6	5	38	5	13
Lesson 2	0	3	4	20	0	3
Lesson 3	0	6	4	7	2	4
Lesson 4	2	11	1	23	3	5
Subtotal:	3	26	15	88	10	25
Teacher B	**1**	**2**	**3**	**4**	**5**	**6**
Lesson 1	1	2	0	10	2	4
Lesson 2	0	3	0	23	0	2
Lesson 3	1	4	2	39	7	11
Subtotal:	2	9	2	72	9	17
	1	**2**	**3**	**4**	**5**	**6**
Both Teachers	5	35	17	160	19	42

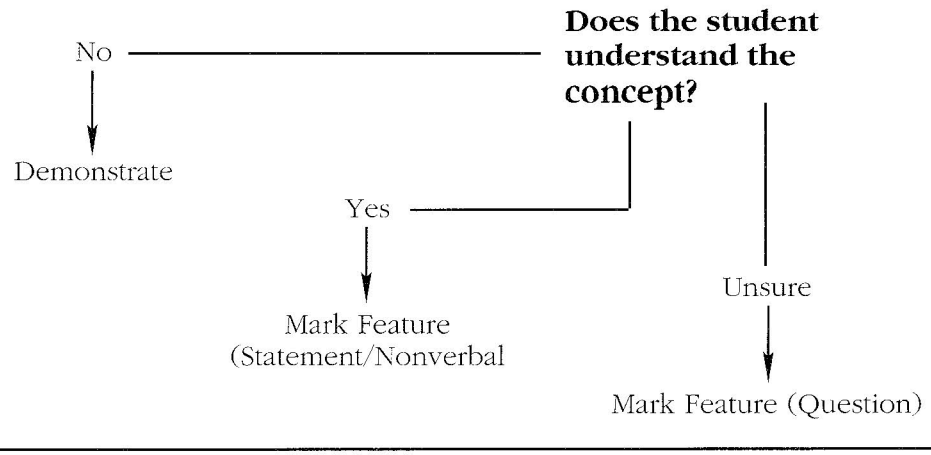

Figure 5. Teacher's Concept Attribution

Even though these observations were from a pilot study and require further work to establish their reliability, Hepler (1986) reported similar observations. While Hepler did not differentiate teacher interactions according to scaffolding categories, teacher talk also exceeded teacher demonstration in his study. Two independent studies (Hepler, 1986; Kennell, 1989) dealing with applied music, therefore, reported that applied teachers do not use modeling or demonstration as the major intervention strategy.

In the instructional world as depicted by Hepler, teachers talk more than they demonstrate. In the empirical world as represented by the Rosenthal study, demonstration was found to be more effective at improving student performance than either teacher verbal description alone or verbal description combined with demonstration. If demonstration is the most effective teaching strategy, then why is it not used more often in applied music lessons? A theory of applied music instruction must also explain why teachers talk more than they demonstrate!

In an attempt to reconcile theory with practice, note that three strategies comprised over 85 percent of all observed teacher scaffolding interventions in Table 2: Marking Critical Features, Reducing Degrees of Freedom, and Demonstration. While the remaining scaffolding strategies—Recruitment, Direction Maintenance and Reducing Frustration—deal with the context of teacher-student interactions, these three strategies link the student with the task at hand. They are the instructional scaffolding strategies.

The Demonstration strategy has been linked to the creation of concepts (Greenfield, 1984, p. 124). Before we create labels, we must introduce conceptual experience and understanding. We employ demonstration strategies to foster new conceptual understanding among our students. When we assume that a student does not understand a particular concept, we offer some form of demonstration intervention to make that concept available to the student.

In contrast, the Reducing Degrees of Freedom intervention has been linked to the development of skills (Bernshtein, 1967, p. 98). To increase a student's technical capabilities, we employ some form of the Reducing Degrees of Freedom scaffolding strategy. When we assume that a student cannot perform a specific skill, we will make the task easier and try to build the student's mastery of the requisite skill. We will assist the student with a strategy that reduces degrees of freedom.

The function of the Mark Critical Features strategy, however, has not been as clearly understood. In reviewing the teacher transcripts from a pilot study, Kennell identified four different modes of communication among the teacher statements attributed to the Mark Critical Features strategy: declarative statements, commands, questions, and nonverbal gestures (1989, p. 221-222). Here

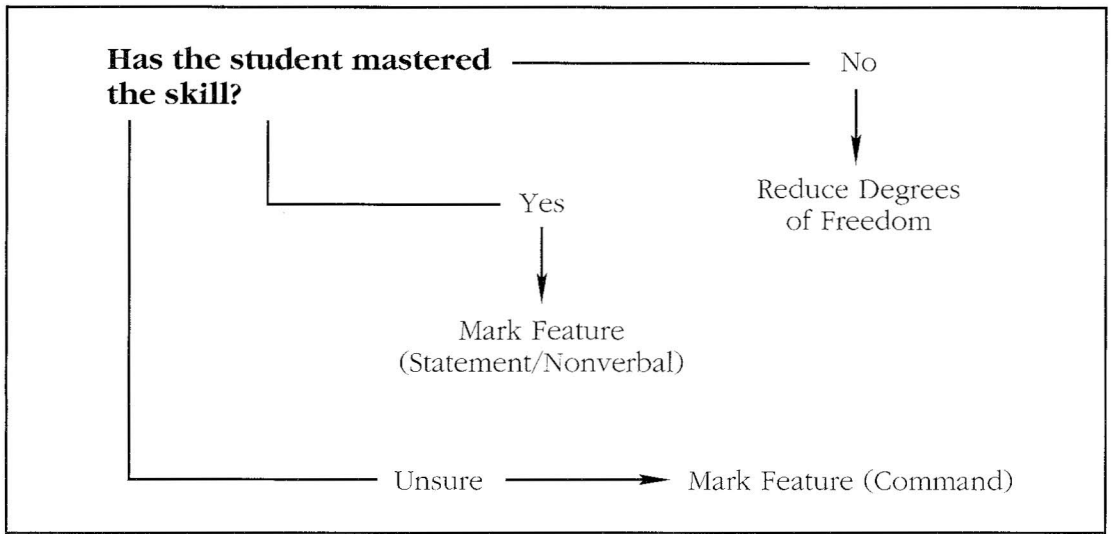

Figure 6. Teacher's Skill Attribution

are some typical examples:

"That phrase is *forte!*" - declarative statement

"Play that section *forte* for me..." - command

[accented fist gesture in the air] - nonverbal gesture

"What does '*forte*' mean?" - question

Applied music teachers at different times in the lesson would use these four different modes to mark a critical feature (in the case above, *forte*). Furthermore, the choice of mode seemed to reflect different underlying assumptions by the teacher as depicted in Figure 5.

The *declarative statement* or *nonverbal gesture* was used when the teacher assumed the requisite musical concept was understood by the student. The *question* was used when the teacher attempted to determine if, in fact, the student understood the concept. A *demonstration* strategy was employed when the teacher assumed that the student did not understand the musical concept. From the teacher's point of view, there were two strategies available to deal with conceptual deficiencies, Demonstration and Mark Critical Features.

The specific choice of a scaffolding strategy may not be determined by the teacher's *assessment* of the student's performance as proposed by Wood, Wood, and Middleton. The selection of a specific scaffolding strategy may be determined instead by the teacher's *attribution* of the student performance. Determining why the student's performance was successful may be a more important decision for the applied teacher than the simple observation that the student's performance was getting better or worse. Figure 6 shows a similar attribution tree for the skill content of lesson interactions.

From the lesson transcripts, both *declarative statements* and *nonverbal gestures* were used when the teacher assumed that the student already possessed the required skill to perform the musical task. *Commands* were used to find out if the student could execute a specific skill or not. If the teacher decided that the student could not perform the skill, a strategy of reducing degrees of freedom was employed to build that skill. Again, from the teacher's point of view there were two strategies available to the teacher to deal with the skills deficiencies: Reduce Degrees of Freedom and Mark Critical Features.

Of course, applied music teachers work with both musical *skills* and musical *concepts* in the lesson. Musical tasks simultaneously present conceptual and skill dimensions. A more complete representation of the applied teacher's scaffolding choices is therefore reflected in Figure 7.

In this model, the applied teacher considers a combination of assessments and attributions which lead to the selection of one of the three instructional scaffolding strategies.

In joint problem-solving contexts, the

teacher's knowledge of the student is very complex and detailed. The applied teacher not only observes the student's current performance, he or she also anticipates a level of performance based on the student's history of achievement. The teacher's choice of a scaffolding strategy may be based on a comparison of the student's actual performance with the teacher's expectation of the student's performance. The ability to predict the student's optimum performance, of course, is a result of acquiring extremely detailed knowledge of the student's capabilities over a prolonged period of study.

Notice that in Figure 7, for every pedagogical moment in an applied music lesson, there are six possible scaffolding strategies at the teacher's disposal. Four of these possibilities are Mark Critical Features strategies and are expressed as statements, questions, commands, and nonverbal gestures. One possibility is a Demonstration strategy and another is Reduce Degrees of Freedom. The Teacher Decision-Making Model thus reflects the observed results of the pilot study where the ratio of Marking Critical Features to Demonstration and to Reduce Degrees of Freedom was approximately 4:1:1 (see Table 2 and Figure 7).

A Theory of Applied Music Instruction

The Teacher Scaffolding Model may serve as the basis for a viable theory of applied music instruction. Lev Vygotsky has provided us with the underlying notion that joint problem-solving contexts are a special class of human teaching/learning experience. He described a Zone of Proximal Development which represented a region of potential action just beyond the student's current capabilities and accessible to the student only with the assistance of a capable teacher. Wood, Bruner, and Ross (1976) have described a set of functional strategies that teachers use in the Zone of Proximal Development.

Two previous theories attempted to explain the strategic choices that teachers make in working interactively with students but were problematic. Transcripts of college applied music lessons did not reveal the sequence of scaffolding strategies predicted by Bruner's Order of Presentation Theory. Wood, Wood, and Middleton's Hierarchical

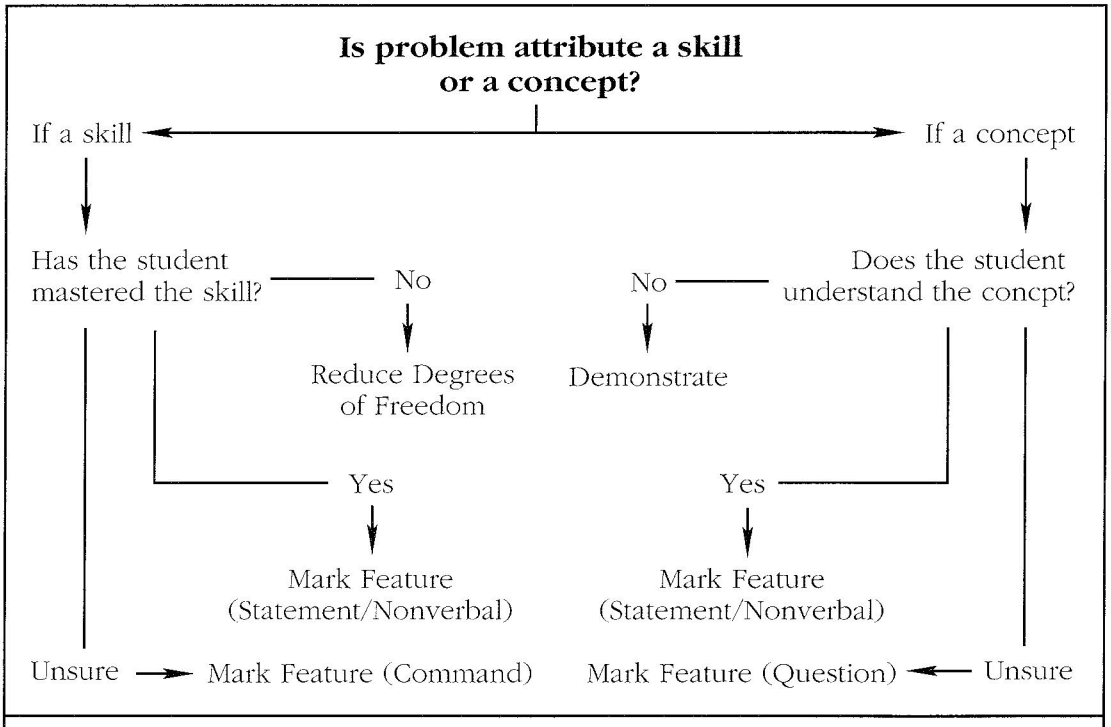

Figure 7. Teacher Scaffolding Model

"[T]here is an apparent contradiction between the Hepler and Rosenthal studies. While Rosenthal suggests that modeling is the most effective pedagogical intervention in the applied music lesson, Hepler's observation of real applied teachers...reveals that applied teachers talk almost four times more than they offer models."

Rule Theory included teacher assessments but omitted the teacher's attribution of the student's performance to skill or luck.

The Teacher Scaffolding Model, however, incorporates both assessment and attribution functions. It facilitates the categorization of complex lesson interactions made possible by scaffolding theory. The configuration of the Teacher Scaffolding Model offers an outline of a more detailed and comprehensive theory of applied music instruction.

Summary

Vygotsky's views suggest that the study of music performance includes two fundamentally different modes of instruction. The applied lesson represents a joint problem-solving context. Individual practice during the week represents a self problem-solving context. An important goal of applied teachers, therefore, must be to foster independent problem-solving skills which the student can use in the practice room.

The joint problem-solving context is created when the applied teacher selects and introduces a specific task for a specific student. According to Vygotsky, this task should be just beyond the student's current capabilities and should create a manageable Zone of Proximal Development for the student. The assignment of appropriate musical tasks for the next lesson is a major responsibility for the applied music teacher.

In supporting the student's current capabilities and in leading the student to successful performance in the Zone, the applied teacher has available a palette of scaffolding strategies that may be selected and used at the teacher's discretion. The Teacher Scaffolding Model suggests that the teacher will select specific strategies to match the student's conceptual and skill deficiencies. In the event that the teacher has not yet acquired a sufficiently detailed knowledge of the student, the scaffolding model accommodates interactions that increase the teacher's knowledge of the student's capabilities.

The Teacher Scaffolding Model requires that the teacher not only select the appropriate type of intervention, but that he or she must also spontaneously generate a sufficiently compelling and effective example of that strategy that is accessible for the student. Scaffolding theory suggests that while there is an infinite variety of both musical tasks and differences among our students, applied teachers may refer to a limited set of contextually specific strategies—like a cognitive template—to then generate a seemingly infinite set of teaching interventions.

In short, scaffolding theory confirms the pedagogical practices of our oral tradition in music performance. The Teacher Scaffolding Model illuminates the inner workings of the applied teacher's decision-making progress. It reveals the complexities involved in making sound pedagogical choices in the applied music lesson.

Scaffolding theory confirms the wealth of knowledge that applied teachers must have at their disposal. It recognizes the importance of detailed knowledge about both our students and our tasks, i.e. the literature of music. It recognizes the choices that teachers must make and the creativity that is involved when teachers decide to intervene in the applied music lesson.

The Teacher Scaffolding Model does not diminish the applied teacher's role. Rather, it reveals the subtlety and richness of each pedagogical improvisation in the applied music lesson. It offers a glimpse of the artistry involved with teaching music.

At the same time, scaffolding theory provides a welcome link between music training and other forms of human learning. The principles of scaffolding can be seen in a wide variety of human models. From athletic training to therapeutic models, from apprenticeships to golf lessons, the principles of functioning in Vygotsky's Zone of Proximal Development are the same.

It is also possible to speculate that the ultimate source of these principles may be the world's oldest and most universal expert-novice relationship, the context of parenthood. Scaffolding theory, therefore, allows us to study the functional components within the applied lesson as well as to link applied music instruction with other human cultural institutions. The Teacher Scaffolding Model offers a theory of applied music instruction that may be tested and evaluated in future research.

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